

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/052145

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G03F7/20

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 308 586 A (COATES VINCENT J) 29 December 1981 (1981-12-29) figure 3 -----	1-14
A	EP 0 727 715 A (AT & T CORP) 21 August 1996 (1996-08-21) figures 3a-b -----	1-14
A	EP 0 973 068 A (NOVA MEASURING INSTR LTD) 19 January 2000 (2000-01-19) figure 6 ----- -/-	1-14

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

25 January 2005

Date of mailing of the international search report

11 05. 2005

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## INTERNATIONAL SEARCH REPORT

I	nternational Application No PCT/IB2004/052145
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	INTERNATIONAL BUSINESS MACHINES CORPORATION: "In-situ exposure tool monitor" RESEARCH DISCLOSURE, KENNETH MASON PUBLICATIONS, HAMPSHIRE, GB, vol. 426, no. 88, October 1999 (1999-10), XP007124945 ISSN: 0374-4353 figure 1 -----	1-14
A	SINGH B ET AL: "IC wafer reflectivity measurement in the UV and DUV and its application for ARC characterization" PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING USA, vol. 1926, 2 March 1993 (1993-03-02), pages 151-163, XP009042684 ISSN: 0277-786X figures 3-6 -----	1-14
A	GAMSKY C J ET AL: "Quantitative analysis of chemically amplified negative photoresist using mirror-backed infrared reflection absorption spectroscopy" PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING USA, vol. 2438, 20 February 1995 (1995-02-20), pages 143-152, XP009042685 ISSN: 0277-786X figure 1 -----	1-14
A	US 2002/012876 A1 (HALLE SCOTT DAVID ET AL) 31 January 2002 (2002-01-31) figure 5a -----	1-14

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.....national application No.  
PCT/IB2004/052145

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see annex

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14

Methods for determining the relative swing curve amplitudes for a plurality of wafer processes in which reflectances as a function of wavelength of different photoresist coated wafers are compared.

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2. claim: Claim 15

A plurality of wafers coated by different processes which have been exposed to actinic radiation.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/IB2004/052145

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 4308586	A 29-12-1981	NONE		
EP 0727715	A 21-08-1996	US 5607800 A 04-03-1997	EP 0727715 A1 21-08-1996	JP 8255751 A 01-10-1996
EP 0973068	A 19-01-2000	EP 0973068 A2 19-01-2000	JP 2000223413 A 11-08-2000	US 2002171828 A1 21-11-2002
		US 6424417 B1 23-07-2002		
US 2002012876	A1 31-01-2002	US 6316167 B1 13-11-2001	US 6497963 B1 24-12-2002	US 6147009 A 14-11-2000
		JP 3506240 B2 15-03-2004	JP 2001242630 A 07-09-2001	EP 1018160 A1 12-07-2000
		TW 546252 B 11-08-2003	WO 0001012 A1 06-01-2000	US 6724086 B1 20-04-2004